

***Remarks***

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 287-622 are pending in the application, with 287, 300, 319, 340, 351, 362, 374, 389, 404, 416, 431, 446, 459, 476, 492, 507, 518, 535, 553, 565, 580, 595, and 608 being the independent claims. Claims 35-59, 61, 81-84, 86-100, 102-118, 120-149, 151-166, 168, 169, 176-189, 191-202, 205-209, 211-222, 224-269, and 272-286 are sought to be cancelled without prejudice to or disclaimer of the subject matter therein. New claims 287-622 are sought to be added. As discussed in the interview held on May 22, 2001, Applicants submit herewith a claim chart which lists the previously pending claims, and the new claims which correspond to each. These changes are believed to introduce no new matter, and their entry is respectfully requested.

The Examiner noted in Paper No. 23, with certain changes made during the May 22, 2001 interview, that claims 169, 176-185, and 257-269 were allowable. These claims correspond exactly to new claims 507-517 and 595-607, respectively.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

***Interview with the Examiner***

Applicants thank Examiner Claire Kaufman for the courtesy extended in the personal interview held on May 22, 2001 with Eric Steffe, Jonathan Klein, and Elizabeth

Haanes. Applicants further thank Examiners Kaufman and Elizabeth Kemmerer for the follow-up telephone interview held on May 31, 2001. The claims presented herein and the following remarks reflect the issues that were discussed in those interviews.

***Rejections under 35 U.S.C. § 112***

The Examiner has rejected claims 35, 36, 38, 39, 42, 49-57, 81, 86-97, 100, 102-115, 120-128, 132, 133 139-149, 151-153, 155-166, 168, 186-189, 191-202, 204-206, 212-222, 224-226, and 230-241 under 35 U.S.C. § 112, first paragraph, as allegedly being not enabled for their entire scope. Certain other claims are objected to for depending upon these rejected claims. Among these rejected claims, the Examiner identifies two types of claims which are allegedly not enabled:

- 1) Claims that are drawn to polynucleotides that are indirectly structurally related . . . to SEQ ID NO:1 or a specific fragment thereof or the corresponding coding sequence thereof.
- 2) Claims are also drawn to polynucleotides that are directly structurally related though not identical to the disclosed encoding nucleic acid of a DR5 polypeptide . . . and encode a polypeptide which has no functional requirement.

Paper No. 23 at page 3. In short, the Examiner argues that for the first type of claim, the claimed polynucleotide must be usable as a probe, and for the second type of claim, the claimed polynucleotide must encode a functional polypeptide.

Solely to advance prosecution, and not in acquiescence to the Examiner's rejections, Applicants have canceled claims 35, 36, 38, 39, 42, 49-57, 81, 86-97, 100, 102-115, 120-128, 132, 133 139-149, 151-153, 155-166, 168, 186-189, 191-202, 204-206, 212-222, 224-226, and 230-241. New claims 287-299, 300-318, 340-350, 362-373,

374-388, 404-415, 416-430, 446-458, 459-475, 492-506, 518-534, 535-552, and 553-564, which correspond to the rejected claims, have been added. Correspondence of these new claims to the subject matter of the canceled claims is shown on the claim chart attached hereto as Exhibit A. For those claims in which the claimed polynucleotide has a certain % identity to SEQ ID NO:1, or a fragment thereof, but need not necessarily encode a polypeptide, the polynucleotide, or a sufficiently large nucleic acid comprised therein, hybridizes to SEQ ID NO:1 under specified conditions. For those claims in which the claimed polynucleotide encodes a polypeptide with a certain % identity to SEQ ID NO:2, or a fragment thereof, a function for the polypeptide is recited.

Based on these remarks, Applicants respectfully request that the enablement rejection under 35 U.S.C. § 112, first paragraph, as applied to the pending claims, be withdrawn.

***Rejections under 35 U.S.C. § 102***

The Examiner has rejected claims 225, 226, 230, 231, 234-240, 242-244, 247, 248, 251-255, [272], 273-276, and 279-285 under 35 U.S.C. § 102(a) as allegedly being anticipated by GenBank Accession No. AA223122. *See* Paper No. 23 at page 4.

Claims 225, 226, 230, 231, 234-240, 242-244, 247, 248, 251-255, 272-276, and 279-285 have been canceled. With respect to the corresponding new claims 553, 554, 555, 556, 559-563, 580-582, 585, 586, 589-593, 608-612, and 615-621, Applicants respectfully traverse. The Examiner points out that GenBank Accession No. AA223122 is about 97% identical to nucleotides 236-698 of SEQ ID NO:1. However, GenBank Accession No. AA223122, when translated in any of the three forward reading frames,

encodes only small stretches of contiguous amino acids of SEQ ID NO:2, due to several frame shifts in the sequence relative to SEQ ID NO:1. The longest stretch of contiguous amino acids which are identical to SEQ ID NO:2 extends from amino acid 32 to amino acid 70 of SEQ ID NO:2, *i.e.*, 39 amino acids. To illustrate this point, three amino acid alignments, in which GenBank Accession No. AA223122, translated in each of the three forward reading frames is compared to amino acids 360 of SEQ ID NO:2, are attached hereto as Exhibit B. As shown by these alignments, GenBank Accession No. AA223122 cannot encode a polypeptide which is at least 90% identical to amino acids 1-133 of SEQ ID NO:2, as recited in claim 553, does not encode any of the polypeptides recited in claim 580, and cannot encode a polypeptide fragment comprising 50 contiguous amino acids within amino acids 1-360 of SEQ ID NO:2 as recited in claim 608. Applicants note that the recited value of 50 amino acids in claim 608 is not critical to the invention, and the remarks above should not be construed as a surrender of equivalent subject matter having less than 50, but more than 39 contiguous amino acids of SEQ ID NO:2.

Based on these remarks, Applicants respectfully request that the rejection under 35 U.S.C. § 102(a), as applied to the pending claims, be withdrawn.

***Rejections under 35 U.S.C. § 103***

The Examiner has maintained rejections of claims 225, 226, 230-244, 247-256, [272], and 273-286 under 35 U.S.C. § 103(a) as allegedly being unpatentable over GenBank Accession No. AA223122 and Chinnaiyan, *et al.*, *Science* 274:990-992 (1996), Sibson, *et al.*, WO 94/01548, and Bjorn *et al.*, *Current Biol.* 2:569-575 (1992), in view

of Adair *et al.*, WO 91/09967, for the reasons set forth in the previous Office Action (Paper No. 17) on pages 6-7.

Claims 225, 226, 230-244, 247-256, and 272-286 have been canceled. With respect to the corresponding new claims 553, 554, 555-564, 580-582, 585-594, and 608-622, Applicants respectfully traverse. Applicants have asserted, *supra*, that the pending claims are novel and non-obvious over GenBank Accession No. AA223122. The remaining references cited by the Examiner do not establish a *prima facie* case of obviousness, because there is no teaching of a polynucleotide comprising a nucleic acid, or a fragment thereof, which is recited in the pending claims. The fact that GenBank Accession No. AA223122 contains frameshifts relative to SEQ ID NO:2 is only apparent based on the hindsight provided by Applicants' disclosure.

Based on these remarks, Applicants respectfully request that the rejection under 35 U.S.C. § 103(a), as applied to the pending claims, be withdrawn.

***Change of Correspondence Address***

Paper No. 23 was sent to Applicants directly, using the original attorney docket number. On August 12, 1999, the PTO was notified that prosecution of this application had been transferred to the law firm of Sterne, Kessler, Goldstein & Fox, P.L.L.C. at the address shown below. Furthermore, the docket number was changed. In support of this, Applicants submit herewith copies of the Change of Correspondence Address form and the post card stamped as received by the PTO on August 12, 1999 (Exhibit C). Applicants respectfully request that the records relating to this application be updated, and that all future correspondence be sent to Sterne, Kessler, Goldstein & Fox, P.L.L.C.,

using the attorney docket number 1488.1310002/EKS/EJH, as shown at the top of this pleading.

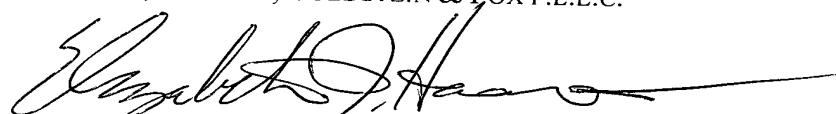
### ***Conclusion***

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



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**Version with markings to show changes made**

Claims 35-59, 61, 81-84, 86-100, 102-118, 120-149, 151-166, 168, 169, 176-189, 191-202, 205-209, 211-222, 224-269, and 272-286 are canceled.

Claims 287-622 are new.